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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/346,256	07/01/1999	MAMORU SATO	B208-1038	2193

26272 7590 01/25/2005

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EXAMINER

SELBY, GEVELL V

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/346,256

Applicant(s)

SATO ET AL.

Examiner

Gevell Selby

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/346,256 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1- 4, 8, 12-15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grage et al., US 5,005,083, in view of Lassiter, US 6,624,846.**

In regard to claims 1, 12, and 20, Grage et al., US 5,005,083, discloses a camera control system and camera control method comprising:

first image pickup device (see figure 1, element WFOV) which picks up an image of an object through a wide-angle lens having distortion, to output a moving image which is generated within a predetermined fixed area (see column 4, lines 39-43);

image processing device (see figure 1, element PMD);

second image pickup device (see figure 1, element NFOC) having no distortion, which outputs a moving image (see column 4, lines 39-43);

display device (see figure 1, element MON) which displays the moving image processed by said image processing device, and which superimposes and displays, on the displayed moving image, a rectangular frame indicative of an image-pickup area of said second image pickup device, and displays the moving image from said second image pickup device together with the processed moving image and the rectangular frame(see figure 3 and column 5, lines 7-24);

designating device (see figure 1, elements CP and SS), which designates a desired rectangular area within the moving image displayed by said display device (see column 5, lines 7-24);

control device (H) which controls at least one of panning, tilting or zooming of said second image pickup device in such a way as to pick up an image corresponding to the rectangular area designated by said designating device (see column 5, lines 28-37: The direction platform of the camera aligns the camera with the direction of the sight); and

wherein a frame image included in the processed moving image of the first image pickup device to be displayed by said display device is generated in response that the desired rectangular area is designated by said designating device (see figure 3, and column 6, lines 35-48).

The Grage reference does not disclose the image processing performs projective transformation processing to correct distortion of the moving image outputted from said first image pickup device.

Lassiter, US 6,624,846, teaches that when using a wide angle lens, it would typically be desirable to perform distortion correction, as known to those skilled in the art, on filmed screens acquired by such a camera.

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Grage et al., US 5,005,083, in view of Lassiter, US 6,624,846 to have the image processing perform projective transformation processing to correct distortion of the moving image outputted from said first image pickup device, in order to improve the quality of the image.

In regard to claims 2 and 13, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1. The Grage reference discloses wherein said display device displays, on a common screen, the moving image processed by said image processing device and the moving image outputted from said second image pickup device (see figure 3).

In regard to claims 3 and 14, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to

Art Unit: 2615

claim 1, wherein a position and a size of the rectangular frame displayed by said display device are determined on the basis of a parameter outputted from said second image pickup device (see figure 3, and column 5, lines 7-24).

In regard to claims 4 and 15, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1, further comprising:

frame rate control device which makes a frame rate of the moving image outputted from said second image pickup device higher than a frame rate of the moving image processed by said image processing device, before the moving images are outputted to said display device (see column 5, lines 47-55: It is inherent that the second image pickup device has a higher frame rate in order to synchronize the two video signals).

In regard to claims 8 and 19, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1. The Lassiter reference discloses wherein said wide-angle lens having distortion for use with said first image pickup device is a fisheye lens(see column 16, lines 30-34).

5. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, as applied to claim 1 above, and further in view of Driscoll, Jr. et al., US 6,593,969.

In regard to claims 5 and 16, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1. The Grage and Lassiter references do not disclose wherein said first image

pickup device includes a plurality of image pickup devices, and said image processing device processes and combines moving images outputted from said plurality of image pickup devices into one moving image.

Driscoll, Jr. et al., US 6,593,969, discloses wherein said first image pickup device includes a plurality of image pickup devices, and said image processing device processes and combines moving images outputted from said plurality of image pickup devices into one moving image (see figure 5 and column 6, lines 19-32).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, and further in view of Driscoll, Jr. et al., US 6,593,969 to have wherein said first image pickup device includes a plurality of image pickup devices, and said image processing device processes and combines moving images outputted from said plurality of image pickup devices into one moving image, in order to provide an image of higher resolution.

6. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846.

In regard to claims 6 and 17, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1. The Grage and Lassiter references do not disclose comprising:

an optical member for making object light incident thereon; and

an optical splitting member for splitting two object light coming through said optical member into two light beams and for making the two split light beams incident on

said first image pickup device and said second image pickup device, respectively, so that image-pickup optical axes of said first image pickup device and said second image pickup device coincide with each other.

Official Notice is taken that it is well known in the art to use:

an optical member for making object light incident thereon; and

an optical splitting member for splitting two object light coming through said optical member into two light beams and for making the two split light beams incident on said first image pickup device and said second image pickup device, respectively, so that image-pickup optical axes of said first image pickup device and said second image pickup device coincide with each other.

Such an arrangement would be advantageous in obtaining the wide-angle image taken through the first image pickup means and the "normal" image, or non-distorted image, taken through the second image pickup means at the same optical axis allowing the match up between the two image to be identical providing the correct control over the second image pickup means.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, to provide an optical member for making object light incident thereon and an optical splitting member for splitting the object light coming through said optical member into two light beams and for making the two split light beams incident on said first image pickup means, with its own optical system, and said second image pickup means, also with its own optical system, respectively, so that image-pickup optical axes of said first image pickup means

Art Unit: 2615

and said second image pickup means coincide with each other so as to allow the user precise control over the system in which both images are obtained on the same optical axis.

7. Claims 7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, as applied to claim 1 above, and further Busko et al., US 5,903,319.

In regard to claims 7 and 18, Grage et al., US 5,005,083 in view of Lassiter, US 6,624,846, discloses a camera control system and camera control method according to claim 1. The Grage and Lassiter references do not disclose wherein said image processing device executes an affine transformation on the basis of information on an image-pickup direction of said first image pickup device.

Busko et al., US 5,903,319, teaches that said image processing means executes an affine transformation on the basis of information on an image-pickup direction of said first image pickup means (Column 1 lines 13 - 24, 46 - 55, furthermore, affine transformations for correcting distortion in images acquired by a wide angle lens are well known in the art).

Such a practice of using an affine transformation to remove the distortion from the first image pickup means is a well known method of allowing a user to view the image "normally" or without the distortion inherent to an image picked up by a wide-angle lens.

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Grage et al., US 5,005,083 in view of

Art Unit: 2615

Lassiter, US 6,624,846, and further Busko et al., US 5,903,319 to have the image processing device execute an affine transformation on the basis of information on an image-pickup direction of said first image pickup device, in order to allow a user to view the image "normally" or without the distortion inherent to an image picked up by a wide-angle lens.

8. The applicant has withdrawn claims 9, 10, and 11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 703-305-8623. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gvs



TUAN HO
PRIMARY EXAMINER